PRODUCTION OF SINGLE CRYSTAL SILICON INGOT AND WAFER BY ADJUSTING PULLING UP SPEED PROFILE IN HOT ZONE AND INGOT AND WAFER PRODUCED BY THE SAME

Patent number:	JP11001393
Publication date:	1999-01-06
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Classification:	
- international:	C30B29/06; C30B15/20; H01L21/208
- european:	
Application number:	JP19980030682 19980213
Priority number(s):	KR19970004291 19970213; KR19970054899 19971024; US19970063086P 19971024; US19970989591 19971212

Also published as:

DE19806045 (A1)

CN1548590 (A)

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Abstract of **JP11001393**

PROBLEM TO BE SOLVED: To provide a method for producing a microelectronic element and an apparatus therefor, in detail, a method for producing a silicon ingot and to obtain a silicon ingot and a wafer produced by the method. SOLUTION: A silicon ingot is produced by pulling up an ingot in an axial direction from a melt in a hot zone furnace by an ingot pulling speed profile which is sufficiently high to prevent an interstitial mass and is sufficiently low to restrict a vacancy mass in a zone rich in vacancy. The ingot thus pulled up is sliced into zones rich in vacancy containing each vacancy mass at the center and plural semi-zero defect wafers having a zero defect zone free from a vacancy mass and an interstitial mass though being positioned between the zone rich in vacancy and the edge part of the wafers.